

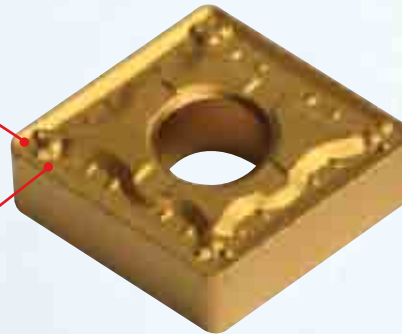
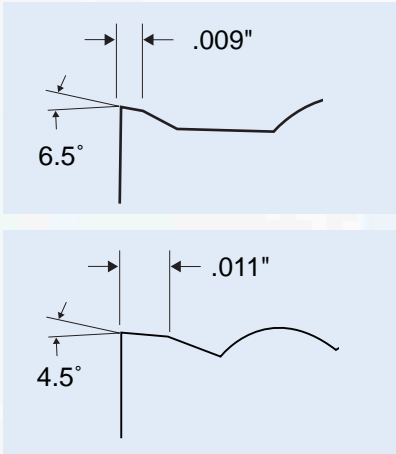


## A Practical Chipbreaker for all Steel Applications

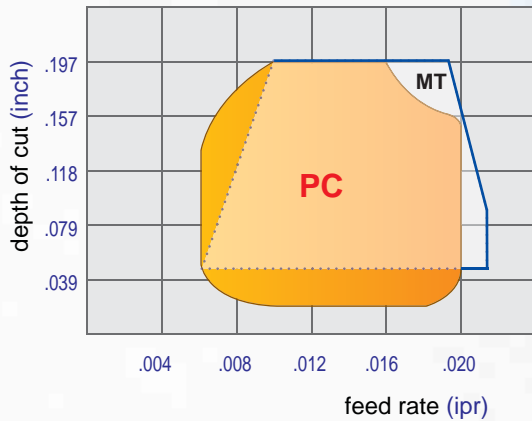
Ingersoll introduces the latest addition to its comprehensive line of chip control technology with the PC chipbreaker. This “Practical Chipbreaker” is designed to provide superior chip control and tool life in mild steel, low carbon steel, medium carbon steel, high carbon steel, bearing steel, and alloyed steel.

The positive cutting edge and unique spherical protrusions on the top surface of the insert support a wide range of feed rate and depth-of-cut combinations, making it a very practical chipbreaker in semi-finishing to medium roughing applications. Compared to conventional inserts, this chipbreaker geometry also provides lower cutting forces in steel applications resulting in higher productivity and extended tool life for facing and lateral turning operations.

### Chip Breaker Geometry



### Chip Control Range



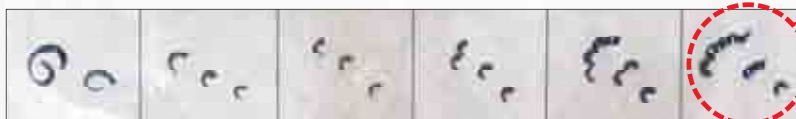
- Insert: CNMG 432 PC
- Cutting speed (V): 656 sfm
- Material: Medium Carbon Steel (1045)

### Features

1. Positive geometry on the cutting edge minimizes cutting forces and extends tool life.
2. Optimal chip breaker design for machining forged steels in semi finishing to medium turning applications.
3. Small and large semi-spherical protrusions on top surface enhance chip control for a very wide range of feedrates and depths of cut. Excellent general purpose chipbreaker.

- Material: Alloy steel (HB 180-230), V=820sfm, Dry cutting
- Insert: CNMG 432 PC

DOC (inch)  
.059



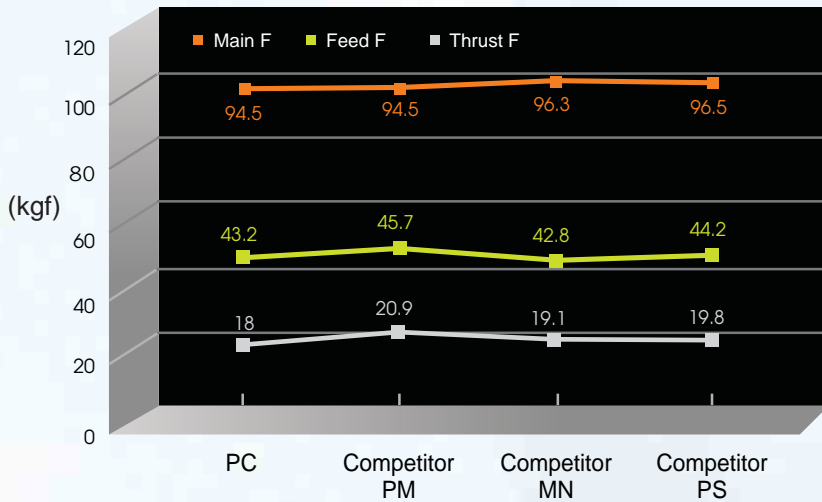
feed rate (ipr)



4. Three dimensional cutting edge geometry provides combination of sharpness and durability.

## Comparison of cutting force test among PC & competitors from Tech Center

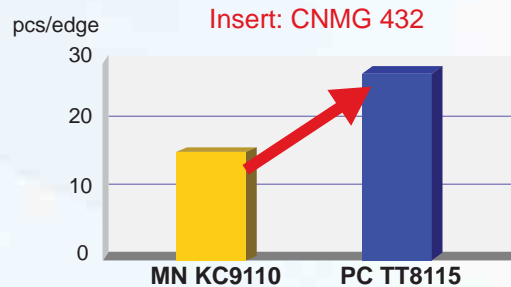
### Test 1



- Insert: CNMG 432 PC
- Material: Medium carbon steel (1045)
- Cutting conditions:  
 $V=656\text{sfm}$   
 $f=.008\text{ipr}$   
 $d=.138\text{inch}$

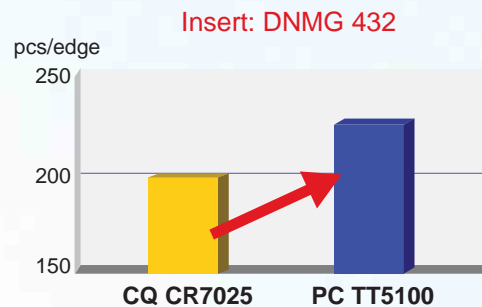
### Case Story 1.

Component:	Bearing	
Material :	Bearing steel	
Cutting speed (V):	950sfm	
Feed rate (f):	.012ipr	
Depth of cut (ap):	.079inch	
Operation:	Internal turning, wet	
<b>Tool life</b>		
Existing method:	CNMG 432 MN KC9110	17pcs/edge
Test insert:	CNMG 432 PC TT8115	29pcs/edge








### Case Story 2.

Component:	Input Shaft	
Material :	Chrome steel(HB160-207)	
Cutting speed (V):	476sfm	
Feed rate (f):	.014~.018ipr	
Depth of cut (ap):	.020inch	
Operation:	External turning, wet	
<b>Tool life</b>		
Existing method:	DNMG 432 CQ CR7025	200pcs/edge
Test insert:	DNMG 432 PC TT5100	230pcs/edge



Available Stocked Items and Recommended Cutting Parameters

Insert	Description	Recommended cutting condition		Dimension(inch)			Grade		
		Feed rate (ipr)	depth of cut (inch)	I.C	Thickness	Corner radius	TT8115	TT3500	TT5100
	CNMG 431 (120404)	0.010(.004-.016)	0.098(.016-.197)	.50	.187	.016		●	●
	CNMG 432 (120408)	0.012(.006-.020)	0.098(.020-.197)	.50	.187	.031	●	●	●
	CNMG 433 (120412)	0.014(.007-.022)	0.098(.024-.197)	.50	.187	.047	●	●	●
	CNMG 434 (120416)	0.016(.008-.024)	0.098(.031-.197)	.50	.187	.063	●	●	●
	* DNMG 431 (150404)	0.010(.004-.016)	0.079(.016-.157)	.50	.187	.016			
	DNMG 432 (150408)	0.012(.006-.020)	0.079(.020-.157)	.50	.187	.031	●	●	●
	DNMG 433 (150412)	0.014(.007-.022)	0.079(.024-.157)	.50	.187	.047	●	●	●
	SNMG 432 (120408)	0.012(.006-.020)	0.098(.020-.197)	.50	.187	.031	●	●	●
	TNMG 332 (160408)	0.012(.006-.020)	0.098(.020-.177)	.375	.187	.031	●	●	●
	TNMG 333 (160412)	0.014(.007-.022)	0.098(.024-.177)	.375	.187	.047	●	●	●
	WNMG 432 (080408)	0.012(.006-.020)	0.098(.020-.157)	.50	.187	.031	●	●	●
	WNMG 433 (080412)	0.014(.007-.020)	0.098(.024-.157)	.50	.187	.047	●	●	●

\* coming soon

● Marked: Stocked standard items.

Prices

Please refer to ASK MARGARET